

CHALLENGES AND POSSIBILITIES IN EMERGENCY EDUCATION: INSIGHTS FOR MATHS TEACHING AND LEARNING AT A JOHANNESBURG REFUGEE SCHOOL.

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Abstract

Zimbabwean refugees and economic migrants at the Central Methodist Church (CMC) Refugee House, in central Johannesburg have successfully established a combined school-St Albert Street Refugee School. This paper comes out of research carried over a period of five months which employed the ethnographic approach and gathered data through classroom non-participant observation, interviewing and document collection. Using the framework of the Direct Instructional Model (DIM), an approach recommended in emergency education, the paper highlights the challenges facing teaching and learning at the Refugee School and explores possible alternatives to some of the challenges. The paper then reflects on how these challenges affect the effective teaching and learning of maths and looks for feasible pathways for maths classroom practices in refugee situations. The possibilities discussed for the refugee maths classrooms are informed by the literature on emergency education and acceptable maths practices.

Introduction: Context of the Study

Zimbabweans have migrated to South Africa mainly because of the country's economic crisis which started slowly in the late 1990s. Political violence and intimidation also led many Zimbabweans to flee their country. It is estimated that about half of Zimbabwe's adult population have either migrated or fled to South Africa.

Some Zimbabwean economic migrants and political refugees have been given refuge and provided with shelter at the Central Methodist Church (CMC), in central Johannesburg. Between 2004 and 2005 a few Zimbabweans trickled to the church to seek accommodation, basic provisions and financial assistance from the generous Bishop Paul Verryn.

In 2007 more than 2 500 refugees were staying at the Refugee House, sleeping on the bare floors, corridors, steps and halls in the five-storey building. At the peak of the Zimbabwe crisis in 2008 the church housed close to 4 500 political refugees and economic migrants. It is within this context that the need for education was identified. Thus the refugees at the church house started and established a primary and a secondary school (St Albert Street Refugee School) with a combined enrolment of about 500 learners.

This paper comes out of my Master of Education research report and draws from the research report, extracts and instances of maths teaching and learning observed in and across primary and secondary classes. The paper highlights challenges facing teaching and learning in an emergency education context at the Refugee School and provides possible ways forward to some of these challenges. It then reflects on how these challenges affect maths teaching and learning and looks for feasible pathways for maths classroom practices in refugee situations. Investigation of the challenges facing emergency education, and how these generally affect maths teaching and learning is done through the theoretical framework of the United Nations' High Commission of Refugees' recommended teaching and learning approach called the

“Direct Instructional Model” (UNHCR, 2003).

St Albert Street Refugee School and its curriculum

The St Albert Street Refugee School is about a kilometre away from CMC Refugee Centre and was opened in July 2008 by four volunteer refugee teachers, after they found out that there was an increase in the number of children at the centre who were not attending school. When I left the research site on November 15 2009 the school had a total of 21 teachers, 534 learners of which 421 were accompanied students and 113 unaccompanied students. The latter term denotes learners who came from their country of origin without parents or guardians and stay at the CMC Refugee House, most of these are Zimbabwean children. The combined school provides tuition from Grade 0 (R) to Form 6 (equivalent to Grade 12). The school follows the Cambridge Curriculum. The decision to follow this British originating curriculum was necessitated by the fact that the refugee learners could not register for the South African Matric as they did not have identity documents. The local Cambridge examination centre run by the British Council did not require the refugee exam-writing candidates to have identification cards, birth certificates or refugee papers. It is on these grounds that the refugees collectively decided to adopt the Cambridge curriculum.

Research Methodology

In carrying out my research I used the ethnographic methodology. I employed three strategies for gathering data that is non-participant observation, interviewing and document collection, over a period of five months from mid-June up to mid-November 2009. Daily observations of the teaching and learning interactions were done for one week in Grade 1, 7, Form 2 (equivalent of Grade 9) and Form 3 (equivalent of Grade 10) classes at the St Albert Street Refugee School. During these non-participant observations of classrooms teaching and learning interactions, field notes were compiled. I used standardised open-ended interview schedules to solicit for information from key knowledgeable members of the refugee community. I also managed to collect school principal reports, the school timetable, curriculum guides and school pamphlets.

Challenges facing the St Albert Street Refugee School and their implications for the teaching and learning of mathematics.

The CMC education system, like any other refugee education initiatives, was regularly in endless financial crises. Lack of funding is the main reason cited for poor quality refugee education (Sinclair 2001). Inadequate finance implies limited supplies in teaching and learning materials, textbooks and furniture and this inhibits learners from concentrating on learning (Williams 2001). There is need for make shift writing pads for the primary school learners who use two large open church halls which have long fixed benches (pews), used by the church congregants. The school lacks relevant current textbooks, teaching and learning materials, stationery for learners and this hinders teaching and learning. In the observed Grade 7, Form 2 and 3 maths lessons only the teachers had Mathematics textbooks, from which they copied examples that were worked in the classes (Fieldwork observation notes, 2 & 3 October, 2009). The non-availability of textbooks in maths classes at the Refugee School inhibits effective and independent maths learning and closes opportunities for students to experience and encounter authentic maths practices.

The deteriorating physical conditions at the CMC Refugee School were at par or even worse than those reported by Bird (2003, p. 62), in Rwandan and Burundian refugees classes at

Goma and Ngara refugee camps in Tanzania where children were reported to have learnt in “cramped, underequipped, poorly lighted classes with fixed benches”. The subdivided Form 2 classroom was cramped with learners, dirty, dusty, too small and poorly aerated. The Grade 4 to 7 primary school classes used the ‘Chapel’ and the ‘Main Sanctuary’ halls at the CMC church. The Main Sanctuary accommodated three primary classes whilst the Chapel Hall had two classes. These halls were poorly ventilated and unpartitioned thus teaching in one class would interfere with other classes. The Grade 1 class at the St Albert Street School had 43 learners yet the UNHCR (1995) recommends a class of not more than 35 pupils in crisis situations. Therefore the greatest challenge to teaching and learning as well as effective maths classroom practices at the CMC Refugee School is inadequate space and poor physical learning conditions.

Like any other refugee programmes, the St Albert School faced high staff turnover as teachers complained of poor incentives, the teachers received a R3 000 monthly stipend. Poor staff retention can disrupt learning as was the case in one Bhutanese refugee class where it was reported that there had been five different teachers for one class in a single year (Brown, 2001). At the Refugee school the most affected by an absence of qualified teachers were Maths and Science classes as Maths and Science teachers are most sought after in South Africa. Most Maths and Science teachers lasted for only one term before seeking for higher paying jobs in government schools. Teaching staff attrition severely affected the teaching of maths and science at the refugee school. The progressive and cumulative nature of maths teaching make high teacher turnover in this subject particularly problematic.

In addition the choice of language of instruction is a problematic issue in the refugee curriculum. Sinclair (2001) argues that the issue of language instruction is a human rights issue and advocates for the use of the mother tongue medium of instruction amongst refugee children. On this issue the Refugee school’s official and agreed medium of instruction and communication is English. Teachers were not allowed to teach in vernacular languages, in the three maths classes observed in Grade 7, in Form 2 and in Form 3, the different Maths subject teachers always used English. However it emerged during my fieldwork observation that the Grade 1 teacher at times used Shona in a class of 43 learners where 15 children spoke Ndebele and 3 students were Congolese with the remainder being Shona speaking learners. The issue of the language of teaching and learning was problematic at the refugee centre and is a persistent problem even in South African multi-lingual Maths classes (Setati, 2005).

Teaching and Learning approaches and Maths classroom practices at the CMC Refugee School.

Refugee education is also embedded in contested pedagogical issues that have characterised the education terrain in the 20th and 21st centuries. The question has been; should refugee teaching and learning methods be child-centred or teacher centred? (Williams 2001). Kagawa (2005) argues for learner-centred progressive pedagogies, which are closely linked to the democratisation of society and also allows for the learner’s critical thinking and exploration. However, democratic teaching methods are difficult to carry out in overcrowded classrooms, are seen as time consuming in a congested curriculum and do contradict with the drive for examination passing (Williams 2001). While many curricula are moving towards participatory methods of teaching and learning, limited space and resources, the nature of the curriculum and assessment methods also determine the pedagogical approach to be

employed. Whilst the school principal in the School Council meeting dated 16 November 2008 had recommended for the enhancement of teacher-pupils interaction in classrooms, in practice the opposite seemed to prevail. At the Refugee School, the maths classrooms were characterised by authoritative teacher centred teaching practices that inhibited learner participation thus depriving the refugee learners of maths discussion and engagement. In the observed Grade 1 class Numeracy lesson the teacher encouraged rote learning and employed closed questions. It was characteristic of the, Grade 7 and Form 2 maths teachers to pose “funnelling questions” thereby inhibiting extended learners’ participation in the lessons. In the observed Form 3 maths class lesson, on Matrices, teaching was teacher dominated with students’ participation being limited to closed questions which were chorused and chanted by the learners (Fieldwork observation notes, 1 October 2009). Such maths teaching and learning approaches are problematic and a challenge to democratic learning that aims to empower learners and ensure that students are given opportunities to explain and make sense of mathematical ideas and procedures. According to Kilpatrick, Swafford and Findell (2001) traditional methods of instruction in maths classes generally lead students to develop procedural fluency at the expense of conceptual understanding, strategic competence, adaptive reasoning and productive disposition. The observed Form 3 “Matrices” maths lesson mostly involved simple addition rather than relating to why, when and what to do next, thus limiting student access and engagement even with procedural knowledge of matrices. The usage of traditional methods of teaching and learning maths at the refugee school deprived learners of a holistic understanding of mathematics.

Direct Instructional/ Active Teaching/Mastery Learning Model

Whilst recommending more participatory approaches to maths teaching and learning at the refugee school, it is important to note that the Cambridge curriculum is a “collection code” that primarily focuses on disseminating the structure of the discipline to the students and has strong pacing and sequencing (Bernstein, 2000). Democratic learning approaches could be difficult to carry out at the Refugee school which is characterised by overcrowding and lack of space. The best teaching and learning approach for use in refugee contexts and most suited for the Refugee community school and for effective maths classroom practices is what the UNHCR (2003, p. 43) calls the “Direct Instructional Model” (DIM).

The DIM had been piloted and introduced in Afghan Refugee Camp schools in the Peshawar region in Pakistani (UNHCR, 2003). This model is teacher directed but in a positive manner that ensures student engagement and is mostly used to teach in difficult circumstances with limited space and resources (UNHCR, 2003). The teacher under this approach is expected to carefully structure every skill and concept, yet ensuring student engagement through the use of task-orientated approaches (UNHCR, 2003). Such an approach to teaching and learning suits the adopted Cambridge Refugee school curriculum which is knowledge focused and would also ensure that learners are engaged in extended subject practices. The Direct Instructional model augurs well with highly regarded maths practices which value learners’ mathematical contributions in classes and at the same time “keeping an eye” on maths conceptual knowledge. The refugee school needs to consider such a teaching and learning possibility both for their school classrooms and maths lessons practices.

Possibilities in Refugee education: Implications for maths teaching and learning.

This part of the paper provides possible pathways for the challenges facing the Refugee

schools. The problems facing the refugee school also spilled into maths lessons thereby affecting the effective teaching and learning of maths. To overcome the problem of textbooks at the CMC Refugee School, I borrowed textbooks from the university libraries which the School administrators photocopied for teaching purposes. A well-resourced independent school that used the Cambridge curriculum, St Johns College had expressed interest in helping the refugee school with textbooks. Maths textbooks enable learners to work independently and at different paces. The supply of teaching and learning materials and stationery had improved substantially at the Refugee School, thanks to the numerous donors which were beginning to support the refugees' education initiatives.

The greatest challenge to teaching and learning at the CMC Refugee School is inadequate space and poor physical learning conditions. The "double-shift system", could be one solution to this problem as was the case in Rwandan refugee schools in Tanzania where such a practice was introduced to overcome overcrowding (Bird, 2003, p. 65). However even if this system is introduced there would still be need for more teachers.

One possibility of overcoming the problem of multi-lingual classes has been suggested by Gutierrez, Baquedano-Lopez & Tejeda, (1999). Gutierrez et al, (1999) argue for the utilisation of 'hybrid languages' under which educators use different languages from the learners' community when teaching basic concepts, this increases the possibility of classroom dialogue. In the same vein Setati (2005) calls for "code-switching" in South African multi-lingual maths classes. This ability to draw on learners' languages as a resource for learning and teaching mathematics has positive implication for learners' access to Mathematical knowledge (Setati, 2005). Applying this theory into practice in Refugee maths classes implies that Shona, Ndebele, Zulu and Xhosa could be used to teach maths concepts to learners. I think such a measure would be very helpful to support learner engagement in mathematical discussions at the Refugee School.

To overcome the challenge of teaching staff turnover the Refugee school administrators had resorted to recruiting untrained teachers who had passed 'Advanced level' from the refugee community. Four such volunteer teachers are teaching at the St Albert Street School. The move of recruiting temporary teachers from the emergency population, according to the UNHCR (1995), ensures sustainability of the education system. The recruitment of untrained Maths teachers from the refugee could possibly lead to the normalisation and stabilisation in maths classes. There is however tension between avoiding teacher attrition by employing temporary untrained teachers at the expense of qualified experienced teachers.

A move towards progressive teaching approaches (similar to the Direct Instructional model) was being spearheaded by a group of lecturers from the Wits School of Education which was holding fortnightly workshops on teaching and learning (Slo, personal communication, 8 October 2009). Such staff development initiatives are highly appreciated and valuable in schools and are more than helpful in fragile education contexts. On this note the UNHCR (1995) recommends that there be in-service training for teachers in emergency situations. We hope that the refugee staff development initiatives offers one viable avenue that would change classroom practices and also impact positively on maths teaching and learning.

Conclusion

The emergency education field is new, full of possibilities and one area of study that is under researched in South Africa. Refugee education borrows theories from other fields. Just as

refugee education borrows from other fields, classroom and maths teaching and learning practices can also be viewed within the frameworks of emergency education approaches such as the Direct Instructional Model. Such approaches offer possible ways and new horizons for emergency education. Of key importance is the need for methodologies to be employed which enable active democratic participation of learners since it is often the undemocratic circumstances in refugee home countries which have led to the influx of refugees. We hope that the possible alternatives discussed in this paper flow into as well as influence the refugee classrooms and maths teaching and learning practices resulting in quality effective education that leads to mathematically proficient and competent learners.

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